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NOTICE OF ALLOWANCE AND FEE(S) DUE

26119	7590	09/08/2008

KLARQUIST SPARKMAN LLP
121 S.W. SALMON STREET
SUITE 1600
PORTLAND, OR 97204

EXAMINER
ARMSTRONG, ANGELA A

ART UNIT	PAPER NUMBER
2626	

DATE MAILED: 09/08/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,708	12/14/2001	Wei-Ge Chen	3382-61343	9604

TITLE OF INVENTION: ADAPTIVE WINDOW-SIZE SELECTION IN TRANSFORM CODING

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1440	$300	$0	$1740	12/08/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: <u>Mail</u>

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Alexandria, Virginia 22313-1450
or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)

_____ (Signature)

_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,708	12/14/2001	Wei-Ge Chen	3382-61343	9604

TITLE OF INVENTION: ADAPTIVE WINDOW-SIZE SELECTION IN TRANSFORM CODING

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1440	$300	$0	$1740	12/08/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
ARMSTRONG, ANGELA A	2626	704-230000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE   (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.   ❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____   Date _____

Typed or printed name _____   Registration No. _____

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,708	12/14/2001	Wei-Ge Chen	3382-61343	9604

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1030 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1030 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

	Application No.	Applicant(s)
Notice of Allowability	10/020,708	CHEN ET AL.
	Examiner	Art Unit	
	ANGELA A. ARMSTRONG	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment filed May 23, 2008*.

2. ☒ The allowed claim(s) is/are *1-8 and 10-41*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some* c) ☐ None of the:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

       1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

NOTICE OF ALLOWANCE

Allowable Subject Matter

1.   Claims 1-8 and 10-41 are allowed.

2.   The following is an examiner's statement of reasons for allowance:

3.   Regarding claim 1, the prior art of record does not specifically teach or fairly disclose a transform coding computer system implementing an open-loop window configuration component stored in computer system memory operating in response to the identified transient location to configure a first configuration of sizes of a plurality of transform input windows over the input signal selected from at least a first window size, a second window size, and a third window size, so as to place one or more windows of the first window size to encompass a region of the input signal having at least one identified transient location and place windows of the second size in areas of the input signal having no identified transient locations; an encoding component stored in computer system memory for transform coding the input signal according to the first configuration of transform input window sizes, and for decoding to produce a reconstructed signal; a quality measurement component stored in computer system memory operating to measure achieved quality of the reconstructed signal; and a closed-loop window configuration component stored in computer system memory operating in response to the achieved quality measurement to adjust sizes of the transform input windows in the first configuration according to the achieved quality measurement to produce a second configuration of transform input windows for use in transform coding the input signal.

4.   Regarding claim 10, the prior art of record does not specifically teach or fairly disclose a method of adaptively selecting a transform window size of a transform coder implementing at

least an open-loop window configuration component stored in computer system memory

operating in response to the identified transient location to configure a first configuration of sizes

of a plurality of transform input windows over the input signal selected from at least a first

window size, a second window size, and a third window size, so as to place one or more

windows of the first window size to encompass a region of the input signal having at least one

identified transient location and place windows of the second size in areas of the input signal

having no identified transient locations; an encoding component stored in computer system

memory for transform coding the input signal according to the first configuration of transform

input window sizes, and for decoding to produce a reconstructed signal; a quality measurement

component stored in computer system memory operating to measure achieved quality of the

reconstructed signal; and a closed-loop window configuration component stored in computer

system memory operating in response to the achieved quality measurement to adjust sizes of the

transform input windows in the first configuration according to the achieved quality

measurement to produce a second configuration of transform input windows for use in transform

coding the input signal.

5.   Regarding claim 11, the prior art of record fails to specifically teach or fairly disclose a

method of adaptively selecting a transform window size of a transform coder implementing at

least for a frame of the input signal in which at least one transient location is detected,

configuring sizes of a plurality of transform windows in the frame to comprise a consecutive set

of at least one second-size window substantially encompassing the transient locations in the

frame and at least one third-size window before the transient, where the second window size is

smaller than the first window size and where the third window size is intermediate to the first

and second window sizes; transform encoding the input signal according to a first transform

window configuration including the configured sizes of transform windows; measuring achieved

perceptual quality of the transform-encoded signal for at least some of the configured transform

windows; storing the measured perceptual quality in memory associated with the transform

coder; retrieving the measured perceptual quality from memory; using the retrieved measured

perceptual quality, increasing sizes of at least some transform windows in the first transform

window configuration where the achieved perceptual quality of the transform-encoded signal

exceeds an acceptable level to produce a second transform window configuration; transform

encoding the input signal according to the second transform window configuration.

6.   Regarding claim 13, the prior art of record fails to specifically teach or fairly disclose a

method of adaptively selecting a transform window size of a transform coder implementing for a

frame of the input signal in which at least one transient location is detected, configuring sizes of

a plurality of transform windows in the frame to comprise a consecutive set of at least one

second-size window substantially encompassing the transient locations in the frame and at least

one third-size window before the transient, where the second window size is smaller than the

first window size and where the third window size is intermediate to the first and second window

sizes; transform encoding the input signal according to a first transform window configuration

including the configured sizes of transform windows; increasing sizes of at least some transform

windows in the first transform window configuration to produce a second transform window

configuration when utilization of a rate control buffer exceeds a fullness threshold; storing the

second transform window configuration in memory associated with the transform coder;

retrieving the second transform window configuration from memory; and using the retrieved

second transform window configuration, transform encoding the input signal according to the second transform window configuration.

7.   Regarding claim 14, the prior of record fails to specifically teach or fairly disclose a method for adaptively selecting a transform window size of a transform coder implementing, for a frame of the input signal in which at least one transient location is detected, configuring sizes of a plurality of transform windows in the frame to comprise a consecutive set of at least one second-size window substantially encompassing the transient locations in the frame and at least one third-size window before the transient, where the second window size is smaller than the first window size and where the third window size is intermediate to the first and second window sizes; transform encoding the input signal according to a first transform window configuration including the configured sizes of transform windows; measuring achieved perceptual quality of the transform-encoded signal for at least some of the configured transform windows; storing the measured perceptual quality in memory associated with the transform coder; retrieving the measured perceptual quality from memory; using the retrieved measured perceptual quality, increasing sizes of transform windows in a frame in the first transform window configuration to an increased minimum size greater than the second window size where the achieved perceptual quality of the transform-encoded signal in the frame exceeds an acceptable level to produce a second transform window configuration; transform encoding the input signal according to the second transform window configuration.

8.   Regarding claim 15, the prior art of record fails to specifically teach or fairly disclose a method of adaptively selecting a transform window size in a transform coder implementing for a frame of the input signal in which at least one transient location is detected, configuring sizes of

a plurality of transform windows in the frame to comprise a consecutive set of at least one

second-size window substantially encompassing the transient locations in the frame and at least

one third-size window before the transient, where the second window size is smaller than the

first window size and where the third window size is intermediate to the first and second window

sizes; transform encoding the input signal according to a first transform window configuration

including the configured sizes of transform windows; detecting pre-echo in the transform-

encoded signal; decreasing sizes of at least some transform windows in the first transform

window configuration in a portion of the transform-encoded signal where pre-echo is detected to

produce a second transform window configuration; storing the second transform window

configuration in memory associated with the transform coder; retrieving the second transform

window configuration from memory; using the second transform window configuration,

transform encoding the input signal according to the second transform window configuration.

9.   Regarding claim 19, the prior art of record fails to specifically teach or fairly disclose a

method of adaptively selecting a transform window size of a transform coder implementing for a

frame of the input signal in which at least one transient location is detected, configuring sizes of

a plurality of transform windows in the frame to comprise a consecutive set of at least one

second-size window substantially encompassing the transient locations in the frame, where the

second window size is smaller than the first window size; transform encoding the input signal

according to a first transform window configuration including the configured sizes of transform

windows; measuring achieved perceptual quality of the transform-encoded signal; storing the

measured perceptual quality in memory associated with the transform coder; retrieving the

measured perceptual quality from memory; using the retrieved measured perceptual quality, re-

configuring the size of at least some of the transform windows configured in the first transform

window configuration according to the measured perceptual quality to produce a second

transform window configuration; and transform encoding the input signal according to the

second transform window configuration.

10.   Regarding claim 27, a method of adaptively selecting a transform window size in a

transform coder implementing at least measuring achieved perceptual quality of at least one

prior transform-encoded frame of the input signal; storing the measured achieved perceptual

quality in memory associated with the computer-enabled transform coder; using the stored

measured achieved perceptual quality, determining a minimal window size for the current frame

based on the measured achieved perceptual quality of the at least one prior transform-encoded

frame; for a first case in which no transient location is detected in the current frame, configuring

size of a transform window to be a first window size; for a second case in which at least one

transient location is detected in the current frame of the input signal, configuring sizes of a

plurality of transform windows in the frame to comprise a consecutive set of at least one second-

size window substantially encompassing the transient locations in the frame, where the second

window size is the minimal window size for the current frame; and transform encoding the

current frame of the input signal according to the configured sizes of transform windows.

11.   Regarding claim 34, the prior art of record fails to specifically teach or fairly disclose

adaptively selecting a transform window size of a transform coder implementing for a frame of

the input signal in which at least one transient location is detected, configuring sizes of a

plurality of transform windows in the frame to comprise a consecutive set of at least one second-

size window substantially encompassing the transient locations in the frame, where the second

window size is smaller than the first window size; transform encoding the input signal according

to a first transform window configuration including the configured sizes of transform windows.

measuring achieved perceptual quality of the transform-encoded signal; re-configuring the size

of at least some of the transform windows configured in the first transform window configuration

according to the measured perceptual quality to produce a second transform window

configuration; and transform encoding the input signal according to the second transform

window configuration.

Any comments considered necessary by applicant must be submitted no later than the

payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ANGELA A. ARMSTRONG whose telephone number is

(571)272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
applications is available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would
like assistance from a USPTO Customer Service Representative or access to the automated
information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Angela A Armstrong/
Primary Examiner, Art Unit 2626